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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,704	12/17/2001	Tatsuya Andoh	217050US0XCONT	8084
22850	7590	07/13/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ALVO, MARC S	
			ART UNIT	PAPER NUMBER
			1731	
DATE MAILED: 07/13/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/015,704

Applicant(s)

ANDOH ET AL.

Examiner

Steve Alvo

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9,10,12-24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9,10,12-24 and 26-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 10, 12, 14-21, 23, 24 and 26-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese Patent Application 1995-189153 (cited in specification, page 4, lines 6-16).

Japanese Patent Application 1995-189153 teaches a polysulfide cooking methods using 0.005-3.00% of a anthraquinone anthracene or hydroanthraquinone compounds, using 13-25% weight active alkali and 10-30% sulfidity with 13-25% of the active alkali being polysulfide. The Examples use "DDAN" as the anthraquinone compound which is 1, 4 dihydro 9,10 anthraquinone, which has an EA=0.154 V. Japanese Patent Application 1995-189153, teaches using 1-ethyl and 2-methyl anthraquinone compounds. If the exact anthraquinone claimed is not taught by Japanese Patent Application 1995-189153 then similar derivatives of anthraquinone, hydroanthraquinone and anthracene would have been obvious to the routineer as their alternativeness as digesting assistants is taught by Japanese Patent Application 1995-189153. The steps of producing the composition cannot be given probative weight in a product claim, e.g. claim 34 weight can not be given to how the liquor is produced.

Claims 13, 22 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 1995-189153 as applied to claim 9 above, and further in view of WO 97/41295.

WO 97/41295 teaches producing polysulfide-pulping liquor by subjecting alkaline liquor, e.g. white liquor, to electrolytic oxidation. It would have been obvious to the routineer to produce the polysulfide liquor of Japanese Patent Application 1995-189153 by the known method of electrolytic oxidizing alkaline liquor, e.g. white liquor, taught by WO 97/41295.

Applicant's arguments with respect to the amount of polysulfide have been considered, but are not convincing as Japanese Patent Application 1995-189153 teaches 25% by weight is active alkali, e.g. 25 g/l and 25% of the active alkali is polysulfide, e.g. 6.25 g/l or "at least 6 g/l". The amount of polysulfide is a rate effective variable. It would have been well within the skill of the artisan to adjust the sulfide concentration to obtain the desired product, e.g. the desired yield. It is noted that WO 97/41295 teaches making polysulfide liquors for pulp production and teaches that the liquors can contain polysulfide of 10.5 and 11.0 g/l (tables 2 and 3). Applicant has not shown any unexpected results using increased amounts of polysulfide. Polysulfide is known to increase the pulp yield, see the instant specification, page 4, lines 10-16. Greater amounts of polysulfide would be expected to further increase the pulp yield, but at a greater chemical cost.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

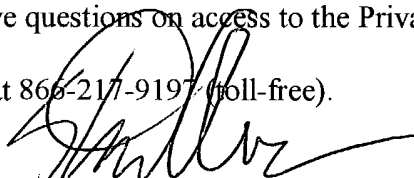
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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steve Alvo  
Primary Examiner  
Art Unit 1731

msa